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EXAMINER

WALTERS, RYAN J

ART UNIT	PAPER NUMBER
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3726

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/567,457	Applicant(s) HATAKEYAMA ET AL.	
	Examiner RYAN J. WALTERS	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/7/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The **disclosure is objected to** because of the following informalities:

-The following paragraphs mention specific claims: 12, 13, 18-25, 27-28, 33, 35, 38-45. **Specific claim numbers should not be recited in the specification** as they are subject to amendment and/or cancellation.

-Throughout the specification there is mentioned “a support portion 18” and “a support body 16”. It is not clear if there is any difference between these components and further, reference numeral 18 does not appear in the drawings. **It appears that 18 is a redundant reference number since 16 denotes the entire support already.**

Appropriate correction is required.

Drawings

2. **Figures 11-13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated.** See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the

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description: **reference number 18 (It appears that this is a redundant reference number since 16 denotes the entire support already).** Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. **Claim 11** is objected to because of the following informalities:

On **line 4**: REPLACE "a plurality" WITH "**the** plurality" since this plurality has already been introduced in line 3. Appropriate correction is required.

5. **Claim 12** is objected to because of the following informalities:

On **line 5**: REPLACE "a plurality" WITH "**the** plurality" since this plurality has already been introduced in line 3. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. **Claim 1** recites the limitation "the direction" in line 3. There is insufficient antecedent basis for this limitation in the claim.
9. **Claim 1** recites the limitation "the tire width" in line 3. There is insufficient antecedent basis for this limitation in the claim.
10. **Claim 1** recites the limitation "the rim side end portions" in line 10. There is insufficient antecedent basis for this limitation in the claim.
11. **Claim 2** recites the limitation "vulcanization **on** the rubber" in line 3. This limitation is unclear.
12. **Claim 2** recites the limitation "said tire width direction outside portion" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.
13. **Claim 3** recites the limitation "said tire width direction outside portion" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.
14. **Claim 4** recites the limitation "said tire width direction outside portion" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.
15. **Claim 5** recites the limitation "said tire width direction outside portion" in lines 3 and 5. There is insufficient antecedent basis for this limitation in the claim.
16. **Claim 6** recites the limitation "said tire width direction outside portion" in lines 3 and 5. There is insufficient antecedent basis for this limitation in the claim.

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17. **Claim 7** recites the limitation "the welding portion" in line 2. There is insufficient antecedent basis for this limitation in the claim.

18. **Claim 8** recites the limitation "said tire width direction outside portion" in line 3. There is insufficient antecedent basis for this limitation in the claim.

19. **Claim 9** recites the limitation "the coupling portion" in line 2. There is insufficient antecedent basis for this limitation in the claim.

20. **Claim 9** recites the limitation "said tire width direction outside portion" in line 3. There is insufficient antecedent basis for this limitation in the claim.

21. **Claim 9** recites the limitation "the internal surface" in line 4. There is insufficient antecedent basis for this limitation in the claim.

22. **Claim 10** recites the limitation "by changing..." in line 2. There is insufficient antecedent basis for this limitation in the claim.

23. **Claim 10** recites the limitation "said tire width direction outside portion" in line 3. There is insufficient antecedent basis for this limitation in the claim.

24. **Claim 10** recites the limitation "the support bodies" in line 4. There is insufficient antecedent basis for this limitation in the claim.

25. **Claim 11** recites the limitation "the support bodies" in line 6. There is insufficient antecedent basis for this limitation in the claim.

26. **Claim 12** recites the limitation "said tire width direction outside portion" in line 4. There is insufficient antecedent basis for this limitation in the claim.

27. **Claim 12** recites the limitation "the support bodies" in line 5. There is insufficient antecedent basis for this limitation in the claim.

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28. **Claim 13** recites the limitation "the leg portions of different sizes" in line 4. There is insufficient antecedent basis for this limitation in the claim.

29. **Claim 13** recites the limitation "said tire width direction center portions" in line 6. There is insufficient antecedent basis for this limitation in the claim.

30. **Claim 13** recites the limitation "the support bodies" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

31. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

32. **Claims 1, 5-7 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuramori (US 6,843,286).**

33. Re **Claim 1**, as best understood, Kuramori discloses a manufacturing method of a support body 3 for a pneumatic run-flat tire including a support portion 4 disposed inside a pneumatic tire 2 and bearing a load when run-flat driving and leg portions 5 provided at both sides in the direction of the tire width of the support portion 4 and abutting against a rim 1 (Abstract; Figs. 1-6; Col. 4, lines 34-55), comprising: a center portion forming process of forming a tire width direction center portion (8 in Fig. 4; or middle 4a in Fig. 6) of said support portion 4 (Figs. 4, 6; Col. 4, line 55 – Col. 5,

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line 55);

an outside portion forming process of forming tire width direction outside portions 4a of said support portion 4 as separate bodies from said tire width direction center portion (Fig. 4, 6; Col. 4, line 55 – Col. 5, line 55);

a leg portion forming process of forming the leg portions 5 comprising elastomer (Col. 4, line 45) integrally to the rim side end portions of said tire width direction outside portions 4a (Figs. 4, 6; Col. 4, line 43 – Col. 5, line 10); and

a coupling process of coupling said tire width direction outside portions 4a formed with said leg portion 5 to both sides of said tire width direction center portion (Figs. 4, 6; Col. 4, line 55 – Col. 5, line 10).

34. Re **Claim 5**, Kuramori discloses said tire width direction center portion (8 or 4a; Figs. 4, 6) and said tire width direction outside portion 4a are formed of metal (Col. 4, lines 55-62; Col. 5, line 49), and said coupling process, partially superposes and welds said tire width direction center portion and said tire width direction outside portion (Col. 4, line 24).

35. Re **Claim 6**, Kuramori discloses said tire width direction center portion (middle 4a in Fig. 6) and said tire width direction outside portion are formed of metal (Col. 4, line 55 – Col. 5, line 10), and said coupling process butt-welds an end portion of said tire width direction center portion and the end portion of said tire width direction outside portion (Fig. 6; Col. 3, line 59; Col. 4, line 24).

36. Re **Claim 7**, as best understood, Kuramori discloses the welding portion and said leg portion 5 are separated by at least 10 mm or more (Col. 6).

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37. Re **Claim 9**, Kuramori discloses the coupling portion between said tire width direction center portion and said tire width direction outside portion is provided at a position not contacting the internal surface of the tire when run-flat tire driving (Figs. 4, 6; Col. 3, lines 1-5).

38. Re **Claim 10**, Kuramori discloses by changing an overlap dimension between said tire width direction center portion and said tire width direction outside portion, so that the support bodies for pneumatic run-flat tires of a plurality of types of different sizes are obtained (Col. 5, lines 30-55).

39. Re **Claim 11**, Kuramori discloses that in said center portion forming process, a plurality of said tire width direction center portions of different sizes are manufactured, and in said coupling process, a plurality of said tire width direction center portions of different sizes are, respectively, coupled with said tire width direction outside portions thereby the support bodies for a plurality of pneumatic run-flat tires of different sizes are obtained (Col. 5, lines 30-55).

40. Re **Claim 12**, Kuramori discloses that in said outside portion forming process, a plurality of said tire width direction outside portions of different sizes are manufactured, and in said coupling process, said tire width direction center portions are coupled with a plurality of said tire width direction outside portions of different sizes, thereby the support bodies for a plurality of pneumatic run-flat tires of different sizes are obtained (Col. 5, lines 30-55).

Claim Rejections - 35 USC § 103

41. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

42. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramori (US 6,843,286).

43. Re **Claim 13**, Kuramori discloses that in said leg portion forming process, a plurality of said tire width direction outside portions, which are integrally formed with the leg portions, are manufactured, and in said coupling process, the plurality of tire width direction outside portions of different sizes, which are integrally formed with said leg portions, are coupled with said tire width direction center portions, thereby the support bodies for a plurality of pneumatic run-flat tires of different sizes are obtained (Col. 5, lines 30-55).

Kuramori does not explicitly disclose that leg portions of different sizes are manufactured. However, Kuramori discloses changing the width, thickness and orientation of the support portion components to increase the effect of diversification in sizes and performance and also that resin or rubber (which the leg portions are made of) can improve the impact and vibration absorbing characteristics (Col. 5, lines 30-55) and it would thus be beneficial to also adjust the sizes of the leg portions. Thus it would be obvious to one of ordinary skill in the art to produce leg portions of different sizes, as taught by Kuramori, in order to increasing the effect of diversification in sizes and

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performance (Col. 5, lines 38-40) and to improve the impact and vibration absorbing characteristics (Col. 5, lines 50-55).

44. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramori (US 6,843,286) in view of Applicant Admitted Prior Art (AAPA hereinafter).

45. Re **Claims 2-3**, Kuramori discloses said elastomer is rubber (Col. 4, line 45).

It appears to be inherent that Kuramori utilizes injection molding and vulcanization of the rubber but Kuramori is silent as to the specific molding steps. However, **AAPA** teaches a leg portion forming process performs injection molding or transfer-molding and vulcanization of rubber configuring a leg portion 106 to a tire width direction outside portion (Figs. 11-13; Page 2, second paragraph of the instant specification). It would be obvious to one of ordinary skill in the art to utilize injection or transfer molding, as taught by AAPA, for the purpose of forming a rigid and durable support portion accommodating to desire dimensions and specifications and also since this is a known method for forming support portions in pneumatic tires (Pages 2-3 of the instant specification).

46. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramori (US 6,843,286) in view of Weigold (US 2,672,914).

47. Re **Claim 4**, Kuramori discloses said elastomer is rubber (Col. 4, line 45).

It appears to be inherent that Kuramori utilizes injection molding and vulcanization of the rubber but Kuramori is silent as to the specific molding steps. However, **Weigold** teaches a process for forming pneumatic tires including

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compression-molding and vulcanizing rubber (Col. 1, lines 1-16). It would be obvious to one of ordinary skill in the art to utilize compression molding, as taught by Weigold, for the purpose of since this is a known method for forming support portions in pneumatic tires and to permit various portions of the tire to be made from different kinds of rubber stock for optimum performance of the tire (Col. 1, lines 7-12).

48. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramori (US 6,843,286) in view of Izumimoto (JP 2004181987A) or Hellweg (US 6,463,974).

49. Re **Claim 8**, Kuramori discloses said coupling process joins said tire width direction center portion and said tire width direction outside portion (Figs. 4, 6; Col. 4, line 55 – Col. 5, line 10).

Kuramori does not disclose the portions are connected by rivets. However, **Izumimoto** (Abstract) and **Hellweg** (Col. 6, lines 12-18) teach joining support portions for run flat tires by rivets. It would be obvious to one of ordinary skill in the art to join the portions with rivets, as taught by Izumimoto and Hellweg, for the purpose of properly connecting the components and so that that rivet can absorb a peripheral directional load acting on the support portion (Abstract of Izumimoto).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN J. WALTERS whose telephone number is (571)270-5429. The examiner can normally be reached on Monday-Friday, 9am-5pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. J. W./
Examiner, Art Unit 3726

/DAVID P. BRYANT/
Supervisory Patent Examiner, Art Unit 3726